

present invention is capable of wide application in environments where the agent workstation (2003) communicates with a wide variety of remote communication systems (2008, 2009, 2010) using a wide variety of protocols and data types.

CLAIMS

Although a preferred embodiment of the present invention has been illustrated in the accompanying Drawings and described in the foregoing Detailed Description, it is understood that the invention is not limited to the embodiments disclosed, but is capable of numerous rearrangements, modifications, and substitutions without departing from the spirit of the invention as set forth and defined by the following claims.

What is claimed is:

Sub #2
1. A programmable agent workstation system comprising:

- (a) a JavaPhone means;
- (b) a PlusTcp means; and
- (c) a PlusTapi means;

5 wherein

said JavaPhone means provides audio controls/status and/or call controls/status;

10 said PlusTcp means provides TCP/IP communication support for local socket connections to said JavaPhone means;

said PlusTapi means enumerates commands and data items to a IWSP platform to allow a DA operator to communicate with said JavaPhone means and perform related audio and call control operations.

15 2. The programmable agent workstation system of Claim 1 wherein one or more components of said system is implemented within an application programming interface (API).

20 3. The programmable agent workstation system of Claim 1 wherein said TCP/IP communication occurs between PC-to-phone endpoints.

4. The programmable agent workstation system of Claim 1 wherein said TCP/IP communication occurs between phone-to-PC endpoints.

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10. The programmable agent workstation system of Claim 1 wherein said JavaPhone means further comprises:

- (a) a volume up/down means;
- (b) a microphone mute/unmute means;
- 5 (c) a raise/lower microphone gain means;
- (d) a headset unjacking detection means;
- (e) a sign on/off control/status means;
- (f) a call arrival indication means;
- (g) a call termination indication means;
- 10 (h) a call conferencing means;
- (i) a make busy control means; and
- (j) a hold/unhold call control means.

11. The programmable agent workstation system of Claim 10 wherein one or more components of said system is implemented within an application programming interface (API).

12. The programmable agent workstation system of Claim 10 wherein one or more components of said system is implemented on a personal computer (PC).

20 13. The programmable agent workstation system of Claim 12 wherein said personal computer (PC) utilizes a graphical user interface.

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16. The programmable agent workstation system of Claim 1 wherein said PlusTcp means further comprises:

- (a) a TcpOpen means;
- (b) a TcpClose means;
- (c) a TcpSend means;
- (d) a TcpRecv means;
- (e) a TcpGetLastError means; and
- (f) a TcpGetErrorString means.

17. The programmable agent workstation system of Claim 16 wherein one or more components of said system is implemented within an application programming interface (API).

18. The programmable agent workstation system of Claim 16 wherein one or more components of said system is implemented on a personal computer (PC).

19. The programmable agent workstation system of Claim 18 wherein said personal computer (PC) utilizes a graphical user interface.

20. The programmable agent workstation system of Claim 19 wherein said graphical user interface utilizes a Microsoft® Windows™ operating environment.

21. The programmable agent workstation system of Claim 19 wherein said graphical user interface utilizes an IBM® AIX™ operating environment.

22. The programmable agent workstation system of Claim 1 wherein said PlusTapi means further comprises:

- (a) a TapiMakeCall means;
- (b) a TapiHoldCall means;
- (c) a TapiUnholdCall means;
- (d) a TapiBlindXferCall means;
- (e) a TapiRetrieveCall means;
- (f) a TapiDisconnect means;
- (g) a TapiBlindConfCall means;
- (h) a TapiLogon means;
- (i) a TapiLogoff means;
- (j) a TapiDTMF means;
- (k) a TapiNotReady means;
- (l) a TapiReady means;
- (m) a TapiVolumeSet means;
- (n) a TapiSetProperty means;
- (o) a TapiGetProperty means;
- (p) a TapiShutdown means;
- (q) a TapiPing means;
- (r) a TapiHoldToggle means;
- (s) a TapiReadyToggle means;

- (t) a TapiMuteToggle means;
- (u) a TapiVolumeUp means;
- (v) a TapiVolumeDown means;
- (w) a TapiMicGainUp means;
- 5 (x) a TapiMicGainDown means;
- (y) a TapiMicGainSet means; and
- (z) a TapiDisplayErrs means.

23. The programmable agent workstation system of Claim 22
10 wherein one or more components of said system is
implemented within an application programming interface
(API).

24. The programmable agent workstation system of Claim 22
wherein one or more components of said system is
implemented on a personal computer (PC).

15 25. The programmable agent workstation system of Claim 24
wherein said personal computer (PC) utilizes a
graphical user interface.

26. The programmable agent workstation system of Claim 25
20 wherein said graphical user interface utilizes a
Microsoft® Windows™ operating environment.

27. The programmable agent workstation system of Claim 25
wherein said graphical user interface utilizes an IBM®
AIX™ operating environment.

28. A programmable agent workstation method comprising:

(1) processing VoIP data TCP/IP communications in support of local socket connections with a PlusTcp means;

5 (2) processing user call audio control/status and call controls/status with a JavaPhone means;

(3) processing user interface commands and data items to a IWSP platform to allow a DA operator control/status with a PlusTapi means;

10 wherein

said processing may be performed synchronously and/or asynchronously.

15 29. The programmable agent workstation method of Claim 28 wherein one or more steps of said method is implemented within an application programming interface (API).

30. The programmable agent workstation method of Claim 28 wherein one or more steps is implemented on a personal computer (PC).

20 31. The programmable agent workstation method of Claim 30 wherein said personal computer (PC) utilizes a graphical user interface.

32. The programmable agent workstation method of Claim 31 wherein said graphical user interface utilizes a Microsoft® Windows™ operating environment.

25 33. The programmable agent workstation method of Claim 31 wherein said graphical user interface utilizes an IBM® AIX™ operating environment.

34. A computer usable medium having computer-readable program code means providing programmable agent workstation functionality, said computer-readable program means comprising:

5 (1) computer program code means for processing VoIP data TCP/IP communications in support of local socket connections with a PlusTcp means;

10 (2) computer program code means for processing user call audio control/status and call controls/status with a JavaPhone means;

(3) computer program code means for processing user interface commands and data items to a IWSP platform to allow a DA operator control/status with a PlusTapi means;

15 wherein

said processing may be performed synchronously and/or asynchronously.

35. The computer usable medium of Claim 34 wherein said medium is compatible with a personal computer (PC).

20 36. The computer usable medium of Claim 35 wherein said computer code means utilizes a graphical user interface.

25 37. The computer usable medium of Claim 36 wherein said graphical user interface utilizes a Microsoft® Windows™ operating environment.

38. The computer usable medium of Claim 36 wherein said graphical user interface utilizes an IBM® AIX™ operating environment.

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